

WHAT IS CLAIMED IS:

1. An ink for use in ink jet recording comprising a dye and a pigment as colorants, wherein said pigment is a self-dispersible pigment in which
 - 5 at least one anionic group is bonded directly or through another atomic group to a surface of said pigment, said dye is an anionic dye, 2-pyrrolidone is further contained as a solvent, and the mass-based content X of 2-pyrrolidone in the ink and the ratio Y
 - 10 of the pigment to the sum of the dye and the pigment satisfy the following formulas 1 to 3 at the same time:
 - formula 1 $12 \leq X < 30$
 - formula 2 $50 \leq Y \leq 75$
 - 15 formula 3 $Y \geq -2X + 84.$

2. An ink for use in ink jet recording comprising a dye and a pigment as colorants, wherein said pigment is a self-dispersible pigment in which
 - 20 at least one anionic group is bonded directly or through another atomic group to a surface of said pigment, said dye is an anionic dye, 2-pyrrolidone is further contained as a solvent, and the mass-based content X of 2-pyrrolidone in the ink and the ratio Y
 - 25 of the pigment to the sum of the dye and the pigment satisfy the following formulas 1 to 3 at the same time:

formula 1 $12 \leq X < 30$

formula 2 $50 \leq Y \leq 75$

formula 3 $Y \geq (-4/3)X + 86.$

5 3. The ink according to claim 1 or 2, wherein
said dye includes at least one disazo dye or trisazo
dye.

10 4. The ink according to claim 1 or 2, wherein
the ink has a Ka value as determined by Bristow's
method of less than $1 \text{ ml} \cdot \text{m}^{-2} \cdot \text{msec}^{-1/2}$.

15 5. The ink according to claim 2, wherein said
ink is used in an ink jet recording apparatus
including heating means capable of heating the ink
during printing operation, and control means which
controls said heating means to maintain the ink
within a specified temperature range.

20 6. The ink according to claim 5, wherein said
specified temperature range is from 40 to 60°C.

7. The ink according to claim 5, wherein said
specified temperature range is from 40 to 50°C.

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8. An ink for use in ink jet recording
comprising a self-dispersible pigment in which at

least one anionic group is bonded directly or through another atomic group to a surface of said pigment and an anionic dye as colorants, and 2-pyrrolidone as a solvent, wherein the mass-based content X % of 2-pyrrolidone in the ink and the ratio Y % of the pigment to the sum of the dye and the pigment respectively satisfy $10 < X < 30$ and $50 \leq Y \leq 75$, and the ink has a first-ejection time of 7 seconds or longer as measured with an ink jet head of an ejection amount of 4.5 picoliters.

9. The ink according to claim 8, wherein the ink is used in an ink jet head with an ejection amount of 10 picoliters or less.

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10. An ink jet recording method utilizing the ink according to any one of claims 1, 2, 8 and 9.

11. An ink container containing the ink according to any one of claims 1, 2, 8 and 9.